

Claims

1. A process for the manufacture of paraffinic hydrocarbons containing gasoline blending component, **characterized** in that a mainly olefinic feed-stock comprising olefins, and sulphur compounds as impurities, is hydrogenated in two steps in the presence of hydrogen and a noble metal catalyst on aluminium oxide support, and in the first step the major part of olefins are converted and in the secondary step the remaining olefins and sulphur compounds react.
- 5 10 2. A process for the manufacture of paraffinic hydrocarbons containing gasoline blending component according to Claim 1, **characterized** in that hydrogen feed /olefin feed molar ratio is 0.9 ... 2.0, preferably 1.0 ... 1.5.
- 15 3. A process for the manufacture of paraffinic hydrocarbons containing gasoline blending component according to Claim 1 or 2, **characterized** in that the feed-stock contains 80–97 wt % of C₈ olefins, 3–20 wt % of C₁₂ olefins, 0.1–7 wt % of C₉, C₁₀, C₁₁ and heavier > C₁₂ olefins and optionally minor amounts of lighter C₆-C₇ olefins and 1–1000 wt-pmm of sulphur compounds, calculated as sulphur.
- 20 4. A process for the manufacture of paraffinic hydrocarbons containing gasoline blending component according to any one of Claims 1 - 3, **characterized** in that the feed-stock originates from a mixture obtained from dimerization of butenes.
- 25 5. A process for the manufacture of paraffinic hydrocarbons containing gasoline blending component according to any one of Claims 1 - 4, **characterized** in that the feed-stock contains as sulphur compounds mainly sulphides, disulphides, thiophene and/or alkyltiophenes.
- 30 6. A process for the manufacture of paraffinic hydrocarbons containing gasoline blending component according to any one of Claims 1 - 5, **characterized** in that the noble metal catalysts comprises < 1 wt% of platinum or/and palladium.

7. A process for the manufacture of paraffinic hydrocarbons containing gasoline blending component according to any one of Claims 1 – 6, **characterized** in that the noble metal catalysts comprises < 1 wt% of platinum.

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8. A process for the manufacture of paraffinic hydrocarbons containing gasoline blending component according to any one of Claims 1 - 7, **characterized** in that the reaction temperature in the first step is in the range of 150–230°C and the pressure is in the range of 20–70 bar and in the second step the temperature is in 10 the range of 180–300°C and the pressure is in the range of 20–70 bar.

9. A process for the manufacture of paraffinic hydrocarbons containing gasoline blending component according to any one of Claims 1 - 8 **characterized** in that the reaction heat is removed from the process and the reaction heat is used for 15 preheating of incoming feed-stock to the dimerization unit of butenes, or as an energy source for distillation columns of bottom boilers of dimerization unit of butenes.

10. A process for the manufacture of paraffinic hydrocarbons containing gasoline 20 blending component according to any one of Claims 1 - 9, **characterized** in that a fixed-bed three-phase hydrogenation reactor and preferably a trickle-bed or a pulse flow regime operated reactor is used in the first step and in the second step.

11. A process for the manufacture of paraffinic hydrocarbons containing gasoline 25 blending component according to any one of Claims 1 - 10, **characterized** in that in the first step the product stream is circulated in the reactor(s).